

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The amendment to the Specification is acknowledged and entered.

The amendment to the Title of the invention is also acknowledged and entered.

Claim Rejections - 35 USC § 103

Claims 17, 19-20, 22-28, 30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Todorova et al (Obtaining and Applying Extracts of Malt Sprouts in the Production of Beer Wort) hereinafter Todorova.

Fertman et al (Use of Malt Sprouts in the Yeast Production) hereinafter Fertman is relied upon as evidence of the extract preparation as discussed below.

In regard to **claims 32 and 33**, Todorova discloses obtaining malt sprouts extract and further using it in the production of beer (Abstract). Todorova discloses that malt sprouts were obtained as a "waste product of malt production" (page 2 of the translation). Todorova further discloses that malt sprouts extract was obtained "by the method described in the literature [4]" (i.e. Fertman). As evidenced by Fertman, the extract was prepared by:

-obtaining crushed malt sprouts (the by-product of malt industry) (page 2 § 2, page 3 bottom paragraph of the translation);

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-adding water to malt sprouts for a period of time to produce immersion liquid
(page 3 bottom paragraph of the translation);

- filtering the immersion liquid to remove the malt sprouts (page 4 top paragraph
of the translation);

Fertman also discloses that malt sprouts is a source of nitrogen and vitamins
(page 2 § 1 of the translation). Fertman further discloses creating optimal conditions for
the transfer of these valuable components into the liquid (page 3 § 1 of the translation).

Therefore, steps (a) and (b) are disclosed in Fertman, which is incorporated in
Todorova as a reference to the method of preparation of malt sprouts extract. In regard
to the step (c) in claim 32, Todorova discloses using malt sprouts extract obtained from
the immersion liquid in the production of beer, where malt sprouts extract is used in the
production of beer wort to improve its composition (pages 1 and 5 of the translation).

In regard to the controlling particle size of malt sprouts to a certain degree recited
in **claims 32, 33, 17 and 20**, the specific surface area of malt sprouts associated with
particle size recited in **claims 22 and 32**, the bulk density of malt sprouts associated
with particle size recited in **claim 23**, both Todorova and Fertman are silent as to these
recitations. Both Todorova and Fertman are silent as to the unpleasant flavor of malt
sprouts. Fertman discloses that malt sprouts were crushed and were obtained as a by –
product of malt industry. One of ordinary skill in the art would have been motivated to
avoid any additional steps of crushing malt particles after the separation from the
malted grain, and therefore to obtain uncrushed sprouts or sprouts crushed to a minimal
degree as a result of further handling after the separation step. One of ordinary skill in

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the art would have been motivated to avoid any additional crushing steps associated with additional crushing equipment in order to avoid use of additional crushing equipment, waste of energy, labor expenses and time consumption associated with operation, maintenance and cleaning of such equipment. One of ordinary skill in the art would have been motivated to avoid any additional crushing steps in order to shorten and simplify the production cycle. All the factors mentioned above would lead to the reduction of malt sprouts cost, which would affect the final cost of the beer beverage, which would positively affect its marketability. It was well known in the art that malt sprouts are used in the form of flour in various applications. However, in the instant case, the malt sprouts are not used in the production of beverage, the immersion liquid is. Therefore, the use of crushed at a high degree malt sprouts is not required. By modifying Todorova to exclude the crushing step set forth above and for the reasons employed therein, it is inherent that particle size of malt sprouts, the specific surface area of malt sprouts associated with particle size and the bulk density of malt sprouts associated with particle size, the flavor of malt sprouts would be as claimed. Further, in regard to the recitation of unpleasant flavor in claims 32 and 20, it is noted that Todorova et al discloses further removing the malt sprouts after the immersion step during the soluble extract preparation (p.17).

In regard to **claim 19**, Fertman discloses removal of malt sprouts after the immersion step by filtering the immersion liquid (page 4 top paragraph of the translation).

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In regard to **claims 24-26, 28 and 30**, Todorova et al discloses production of beer beverage.

In regard to **claim 27**, Todorova is silent as to the amount of immersion liquid used in the preparation of wort. However, Todorova discloses balancing the content of amino nitrogen and metallic ions in the beer must (i.e. wort). Therefore, one of ordinary skill in the art would have been motivated to vary amount of the immersion liquid included in the wort composition, depending on the initial content of the amino nitrogen and metallic ions in the beer wort and the final desired value of these substances in the beer wort. Hence, the amount of immersion liquid used for the preparation of the beer wort would depend on the degree of amino nitrogen and metallic ions disbalance in beer wort.

Claims 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Todorova in view of Takaichi et al (US 6,251,457) hereinafter Takaichi.

Todorova is taken as cited above. Todorova discloses that obtained malt sprouts extract has a high content of amino nitrogen (page 5 of the translation). Todorova et al also discloses that malt sprouts extract contains various amino acids and metallic cations (minerals such as zinc, manganese, copper and magnesium (Pages 4-7 of the translation). Todorova is silent as to the use of malt sprouts extract in the production of the soft beverages. Takaichi discloses preparation of powdered soft drink by addition of amino acid and minerals (Col. 3 lines 17-41). Thus, one of ordinary skill in the art would have been motivated to modify Todorova in view of Takaichi and to use malt sprouts extract in the preparation of the soft beverage as taught by Takaichi. One of ordinary

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skill in the art would have been motivated to do so in order to increase nutritional value of the beverage by addition of vitamins and amino acids as taught by Takaichi.

Response to Arguments

Applicant's arguments filed 06/09/2011 have been fully considered but they are not persuasive.

On page 7 of the Reply to the Non-Final Office action, Applicants summarize the Non-Final rejection mailed 02/09/2011.

On page 8 of the Reply, Applicants state the following:

The present claims are clearly different from the invention of Todorova by using of immersing liquid of specific particle size-controlled malt sprout, which is obtained by immersing said malt sprout in a liquid to allow the components of the malt sprout to seep out into the liquid. Further, in Fertman, there is also no description or suggestion of using of immersing liquid of specific particle size-controlled malt sprout.

Examiner respectfully disagrees. Todorova discloses obtaining malt sprouts extract and further using it in the production of beer (Abstract). As evidenced by Fertman the extract was obtained by immersion. Therefore, Todorova discloses “using of immersing liquid of malt sprout”, which “is obtained by immersing said malt sprout in a liquid to allow the components of the malt sprout to seep out into the liquid”. In regard to the Applicants’ arguments regarding the particle size control (page 8 of the Reply), both Todorova and Fertman are silent as to these recitations. Both Todorova and Fertman are silent as to the unpleasant flavor of malt sprouts. Fertman discloses that malt sprouts were crushed and were obtained as a by-product of malt industry. One of

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ordinary skill in the art would have been motivated to avoid any additional steps of crushing malt particles after the separation from the malted grain, and therefore to obtain uncrushed sprouts or sprouts crushed to a minimal degree as a result of further handling after the separation step. One of ordinary skill in the art would have been motivated to avoid any additional crushing steps associated with additional crushing equipment in order to avoid use of additional crushing equipment, waste of energy, labor expenses and time consumption associated with operation, maintenance and cleaning of such equipment. One of ordinary skill in the art would have been motivated to avoid any additional crushing steps in order to shorten and simplify the production cycle. All the factors mentioned above would lead to the reduction of malt sprouts cost, which would affect the final cost of the beer beverage, which would positively affect its marketability. It was well known in the art that malt sprouts are used in the form of flour in various applications. However, in the instant case, the malt sprouts are not used in the production of beverage, the immersion liquid is. Therefore, the use of crushed at a high degree malt sprouts is not required. By modifying Todorova to exclude the crushing step set forth above and for the reasons employed therein, it is inherent that particle size of malt sprouts, the specific surface area of malt sprouts associated with particle size and the bulk density of malt sprouts associated with particle size, the flavor of malt sprouts would be as claimed.

In response to Applicants' arguments regarding Fertman reference teaching "pulverized sprouts". It is noted that Fertman is not relied upon as a teaching of a particle size of malt sprouts. It is also noted that Fertman is silent as to the particle size

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of malt sprouts. The web-page attachment containing definition of the word "pulverized" does not define the particle size of malt sprouts. In any case, Fertman is not relied upon as a teaching of a particle size of malt sprouts.

In response to Applicants' arguments regarding Takaichi reference, it is noted that Takaichi is relied upon as a teaching of preparation of powdered soft drink by addition of amino acid and minerals (Col. 3 lines 17-41). Todorova et al also discloses that malt sprouts extract contains various amino acids and metallic cations (minerals such as zinc, manganese, copper and magnesium (Pages 4-7 of the translation). Thus, one of ordinary skill in the art would have been motivated to modify Todorova in view of Takaichi and to use malt sprouts extract in the preparation of the soft beverage as taught by Takaichi. One of ordinary skill in the art would have been motivated to do so in order to increase nutritional value of the beverage by addition of vitamins and amino acids as taught by Takaichi.

In response to applicant's argument that the particle size of malt sprouts is responsible for the elimination of the unpleasant taste (page 9 of the Reply), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VERA STULII whose telephone number is (571)272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vera Stulii/
Examiner, Art Unit 1781